

Notice of Allowability

Application No.

09/820,710

Examiner

Alessandro V. Amari

Applicant(s)

KATO ET AL.

Art Unit

2872

-- The **MAILING DATE** of this communication appears on the cover sheet with the correspondence address--
All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/24/2004.
2. ☒ The allowed claim(s) is/are 1,3,5,10-13,37-46,54 and 56-64.
3. ☒ The drawings filed on 30 March 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08).
Paper No./Mail Date 5/24/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413).
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

REASONS FOR ALLOWANCE

1. Claims 1, 3, 5, 10-13, 37-46, 54 and 56-64 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Claim 1 is allowable over the prior art for at least the reason that the prior art fails to teach or reasonably suggest, "for forming an intermediate image on the basis of only abaxial light received from an object" as set forth in the claimed combination. Claims 3, 5, 11, 13, 54 and 60 are allowable based upon their dependence on claim 1.

Claim 2 is allowable over the prior art for at least the reason that the prior art fails to teach or reasonably suggest, "wherein said projection optical system does not include a lens having a negative power, wherein said projection optical system does not include a mirror having a negative power, and wherein said projection optical system does not include a diffractive optical element having a negative power" as set forth in the claimed combination. Claims 56 and 61 are allowable based upon their dependence on claim 2.

Claim 10 is allowable over the prior art for at least the reason that the prior art fails to teach or reasonably suggest, "wherein said projection optical system does not include a mirror having a power, except the single concave mirror of said first imaging optical system" as set forth in the claimed combination. Claims 57 and 62 are allowable based upon their dependence on claim 10.

Claims 12, 37-46, 58, 59, 63 and 64 are allowable for the reasons stated in previous office actions.

The prior art of record, Shafer et al and Foo teach a projection optical system comprising a first imaging system for forming an intermediate image, a second imaging

optical system and a field optical system disposed between the first and second imaging optical systems. However, the prior art does not teach forming an intermediate image on the basis of only abaxial light received from an object or that the projection optical system does not include a lens having a negative power, a mirror having a negative power, and a diffractive optical element having a negative power or that the projection optical system does not include a mirror having a power, except for a single concave mirror of the first imaging optical system and there is no motivation or teaching to modify this difference as derived.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alessandro V. Amari whose telephone number is (571) 272-2306. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ava (jv)
07 July 2004


MARK A. ROBINSON
PRIMARY EXAMINER